

with the moon's parallax and declination, together with the date and corresponding time and height of high water ; the height of the barometer is also added to the observations of about four years. The second book contains the same quantities, classified further according to the different calendar months, and for each minute of the moon's horizontal parallax. The third book contains a similar classification for the moon's declination. The average results are given in tables at the end.

Some remarks are subjoined on the registers of the observations taken at the London and St. Katherine's Docks; from which it appears that the tide is about five minutes earlier in the former than in the latter of these two places ; and that the difference in height is about five feet.

"On the Star-fish of the genus *Comatula*, demonstrative of the *Pentacrinus Europæus* being the young of our indigenous Species." By John V. Thompson, Esq., F.L.S., Deputy Inspector General of Hospitals. Communicated by Sir James Macgrigor, Bart., F.R.S.

The author states that the *Pentacrinus Europæus*, which is fixed by its stem to other bodies, and consequently deprived of the power of locomotion, is produced from the ova of the *Comatula*, and becomes in a subsequent stage of its evolution detached, assuming the form of this genus of *Asterida*, and capable of moving freely in the ocean ; at one time crawling amongst submarine plants, at others floating to and fro, or swimming in a manner similar to *Medusæ*.

"On the Ova of Women and Mammiferous Animals, as they exist in the Ovaries before Impregnation." By Thomas Wharton Jones, Esq. Communicated by Robert Lee, M.D., F.R.S.

After reviewing the accounts given by various authors of the structure of the ovaries, corpora lutea, and ova in different tribes of animals, the author proceeds to the anatomical description of the ovaries in the human species, which he finds to correspond with those of the Mammalia generally, and to consist of a *parenchyma* or *stroma*, and an envelope or *indusium*, derived from the peritoneum. The stroma immediately under the peritoneal envelope is condensed into the form of a tunic, to which the peritoneum closely adheres, and which has received the name of the *tunica albuginea*, or *indusium proprium*. The vesicles of De Graaf are imbedded in this tunic, and are situated principally near the surface of the ovary : in the human species they are about one fifth of an inch in diameter. The proper capsule of the Graafian vesicle is composed of two layers ; the outer being thin, dense, and vascular ; the inner, thicker, softer, and more opaque. The nucleus of the vesicle consists of, 1st, a granular membrane ; 2ndly, a coagulable granular fluid inclosed in the membrane ; 3rdly, a circular mass or disc of granular matter, termed by Baer the *proligerous disc*, connected with the granular membrane on the prominent side of the vesicle, and presenting in its centre, on the side towards the interior of the vesicle, a small rounded prominence, called the *cumulus*, and on the opposite side a small cup-like cavity, hollowed out of the cu-

mulus ; and, 4thly, the ovum, which is contained in the cavity just mentioned. The human ovum is so small as to be only just perceptible to the naked eye, being the 150th part of an inch in diameter. It has a soft transparent envelope of considerable thickness, and contains a substance composed of grains, adhering together by the intervention of a delicate mucous tissue. At the inner surface of the envelope, the author discovered a delicate transparent vesicle, about the 900th part of an inch in diameter, and having on one side a small elevation, which, projecting among the grains composing the walls of the granular sac, fixes the vesicle in its place. The author considers this vesicle as being analogous to that described by Professor Purkinje in the cicatricula of the immature eggs of birds, and which exists also in the ova of other oviparous animals, and is termed by Baer the *germinal vesicle*.

The author has also examined the ova of the cow, sheep, sow, rabbit, rat, and mouse ; and has found in all these animals a germinal vesicle, differing in no essential particular from the human structure, and in size bearing a proportion to that of the ovum as one to six.

Although there is, at first sight, a considerable resemblance between the nucleus of the vesicle of De Graaf and the immature yolk of the egg of a bird, the author thinks, contrary to the opinion of Baer, that there is no real analogy between them ; because, in the Graafian vesicle of the Mammalia there is no membrane surrounding its nucleus similar to the vitellary membrane of the ovum in birds, nor does this latter membrane appear first under the form of a granular membrane. The vesicle of Purkinje consists merely of a delicate capsule containing a fluid ; while in the minute ovum of Mammalia there are found all the essential elements of the egg of birds and other Ovipara, namely, an external membrane, analogous to the vitellary membrane, but performing a different function ; a granular membrane, containing a thin fluid, corresponding to the immature yolk of a bird's egg ; and a vesicle in every respect analogous to the vesicle which Purkinje found in the hen's egg, while still lodged in the ovary. The author considers the granular membrane, proligerous disc, and granular fluid of the Graafian vesicle, as parts which are superadded, and of which there is no trace within the capsule of the ovary of a bird.

“ Some Remarks on the difficulty of distinguishing certain genera of Shells ; and on some Anomalies observed in the Habitations of certain species of Mollusca.” By John Edward Gray, Esq., F.R.S.

In opposition to the opinion of those geologists who consider that all shells of the same form and character have been inhabited by one genus of animals ; that all the species of a genus live in similar situations ; and that all the species of fossil shells, appearing from their character to belong to some recent genus, have been formed by animals which in their living state had the same habits as the most commonly observed species of that genus,—the author proposes to show, first, that shells having the appearance of belonging to the same natural genus are sometimes inhabited by very different animals ; and, secondly, that some species of shell-bearing molluscous animals live in dif-